

# *Project Baseline Summary Report*

Data Source: **EM CDB**

Operations/Field Office: **Idaho**

Site Summary Level: **Idaho National Engineering and Environmental Laboratory**

Project **ID-WM-101 / INEEL LLW/MLLW/Other Waste Program**

Report Number: **GEN-01b**

Print Date: **3/10/2000**

HQ ID: **0570**

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## **General Project Information**

### **Project Description Narratives**

#### **Purpose, Scope, and Technical Approach:**

##### **Purpose:**

The purpose of this Project Baseline Summary (PBS) is fourfold:

1. Provide Treatment, Storage, and Disposal (TSD) activities for INEEL generated mixed low level waste (MLLW), low level waste (LLW) and hazardous waste (HW).
2. Provide a treatment option at the INEEL Waste Experimental Reduction Facility (WERF) for elimination of DOE Complex-wide generated MLLW that is suitable for incineration, stabilization and macroencapsulation.
3. Manage stored MLLW that is awaiting the development of treatment processes or disposal capabilities.
4. Provide an integrated full service commercial approach (Waste Generator Services) management of MLLW, LLW, and HW from the point of generation through treatment and disposal.

##### **Scope:**

##### **Mixed Low Level Waste -**

The INEEL will focus on using the Waste Experimental Reduction Facility (WERF) incinerator to treat INEEL generated MLLW along with scheduling treatment of MLLW for other DOE sites through FY2003. Ten incineration campaigns are planned each fiscal year at WERF. This approach is consistent with the DOE complex Environmental Management (EM) Integration Team. It is estimated that two to four burn INEEL MLLW campaigns will be necessary to support the INEEL agreements with the State of Idaho and Site Treatment Plan (STP) deliverables. The remaining capacity will be used to treat DOE Complex-wide MLLW. Future use of the MLLW treatment processes of stabilization, macroencapsulation, and sizing/sorting/segregation to treat DOE Complex-wide MLLW is planned.

##### **Compliance with the STP and RCRA will require:**

- Operation of five MLLW treatment processes (incineration, stabilization, macroencapsulation, sizing/sorting/segregation and lead cask dismantlement;
- Operation of four RCRA permitted storage facilities (PER-623 WERF Waste Storage Building (WWSB), PER-613 Mixed Waste Storage Facility (MWSF), Idaho Chemical Processing Plant (ICPP)-1617, Radioactive Mixed Waste Storage Facility, ICPP-1619 Hazard Chemical and Radioactive Waste Storage Facility);
- Maintain the INEEL emergency supply of bulk lead brick, sheet, and shot (PER-612 WROC Lead Storage Facility [WSLF]);
- Other DOE Complex or commercial treatment/disposal facilities will be used to support compliance with the STP. Examples include the DOE Oak Ridge Toxic Substance Control Act (TSCA) incinerator and the RCRA Subtitle C disposal facility operated by Envirocare in Utah.

##### **Low Level Waste -**

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Dataset Name: **FY 1999 Planning Data**

Page 1 of 24

Date of Dataset: **9/20/1999**

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LLW volume reduction using compaction and sizing activities at WERF will continue through FY2003, followed by disposal at the Sub-Surface Disposal Area (SDA) at the Radioactive Waste Management Complex (RWMC) through FY2006. LLW not suitable for volume reduction will be direct disposed of at the SDA. Corrective actions identified in the DOE Implementation Plan for the DNFSB Recommendation 94-2 will be completed and will support continued environmentally safe contact handled (CH)-LLW disposal through FY2006 (RH-LLW is scheduled to be disposed of in the SDA through FY2008). Centralized planning to disposition Special Case Waste (SCW) will be coordinated with the waste generators. SCW will require continued storage until disposal options are available.

Hazardous Waste -

Commercial TSD facilities will continue to be utilized for HW through FY2006.

Waste Generator Services -

The scope of the various tasks under WGS includes the waste management activities from the pre-generation planning phase, through acceptance at a TSD facility, and ultimate waste disposition. Waste streams included under the WGS management umbrella are LLW, MLLW, HW, SCW, recyclable material, excess material, liquid waste, and Industrial waste. WGS activities are focused on safe and compliant waste determination, waste characterization, and meeting TSD waste acceptance criteria. WGS is responsible for several support activities that are necessary for proper management of the multiple waste streams across the INEEL. These include the selection of offsite TSD facilities and associated subcontract management, transportation/packaging, transportation compliance, management of the electronic data base Integrated Waste Tracking System (IWTS), and maintenance of the INEEL Reusable Property, Recyclable Materials, and Waste Acceptance Criteria (RRWAC), administration of waste container management and Special-Case performance acceptance.

Technical Approach -

The overall approach for disposition of MLLW, LLW, SCW, and HW waste is to utilize the most cost-effective option available. As commercial treatment and disposal capabilities become available and are proved cost effective, they will be used whenever possible, followed by existing INEEL or DOE Complex treatment units. This represents a very low capital approach to eliminating mixed waste streams in compliance with the STP enforceable milestones.

A secondary advantage of MLLW treatment is LLW volume reduction. The WERF incinerator operates continuously (24 hours per day/7 days per week) for approximately two weeks per month. During incineration of characteristic MLLW, the waste feed may be supplemented with LLW in order to maintain incinerator-operating temperatures. The resulting ash is characterized to meet disposal criteria as LLW (either directly, following stabilization, or further treatment). This provides a dual benefit in that less surrogate material (e.g., clean feed stock such as corn cobs, plastic, or oil used to increase the BTU content of the waste feed) must be purchased for supplemental waste feed and the LLW is treated for no additional cost. Listed MLLW is similarly augmented with LLW. The principal difference is that the amount of LLW is minimized because the resulting ash remains listed MLLW and requires offsite disposal at a Subtitle C facility.

Further LLW volume reduction is accomplished with the same operations staff required for MLLW incineration. When the incinerator is down for ash

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Dataset Name: **FY 1999 Planning Data**

Date of Dataset: **9/20/1999**

Page 2 of 24

# *Project Baseline Summary Report*

Data Source: **EM CDB**

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clean out or maintenance, the same operational staff can operate other MLLW treatment units or LLW size reduction and compaction processes. This provides significant LLW volume reduction, maximizing the effective use of the RWMC SDA active pit space.

SCW is generally not acceptable for near-surface disposal and has limited or no planned disposal alternative. SCW activities at the INEEL, within this PBS, are limited to a coordination effort for the SCW generators. Efforts include inventory of known SCW volumes, and coordinating generator treatment/temporary storage options.

HW will be consolidated in storage facilities or at the generating facility, awaiting shipment for treatment /disposal at an off site commercial treatment/disposal facility. Off site treatment/disposal facilities will be evaluated in support of direct shipment from the INEEL generator to the treatment/disposal vendor, thereby reducing the need for on site HW storage.

The technical approach under WGS is to align personnel with a given waste stream such that they have responsibility and accountability for the waste stream from preplanning phase through final disposition. WGS insures that the waste stream pre-planning and approval phase including the waste minimization review, eliminates redundant functions, eliminates multiple verification and reviews, and maintains one generator/customer interface per facility that acts as a single point of contact. Implementation of this approach realigns the independent functions of waste determination, approvals into single-point accountability for a given waste stream. Funding for waste characterization, including sampling/analysis, transporation, temporary waste storage, and off site treatment is provided by the waste generator.

### **Project Status in FY 2006:**

The backlog of MLLW associated with this PBS, as outlined in the STP, will be treated and disposed by the negotiated milestones dates. Waste Redcuton Operating Complex (WROC) MLLW and LLW treatment processes would be shut down at FY2003 year-end. RCRA closure of WERF, the MLLW Repackaging Facility and two MLLW storage facilities will be performed from FY2004 through FY2005 and are included in PBS ID-ER-110 - Decontamination & Decommissioning (D&D).

The Environmental Restoration (ER) and D&D programs will utilize the remaining capacity of the active RWMC SDA disposal pit for LLW, assuming a favorable Record of Decision on WAG 7 in FY2003.

The majority of SCW sealed sources will have been transferred to consolidated onsite storage and/or recycled offsite by FY2006. For other SCW, the generators will have completed characterization and the requirements for shipping and disposal will be identified and included in outyear funding requests.

Hazardous waste will continue to be treated or disposed as it is generated using off site facilities. No backlog is anticipated.

### **Post-2006 Project Scope:**

MLLW generation will continue for the life of the INEEL. Operation of the remaining MLLW storage facilities, along with treatment of newly generated MLLW by the Advanced Mixed Waste Treatment Project will be transferred to PBS ID-WM-107, Long Term Treatment/Storage/Disposal Operations beginning in 2007. RCRA closure of MLLW storage facilities (WWSB and CPP-1617) will be begin in FY2003 and is included in PBS ID-ER-110 - Decontamination & Decommissioning (D&D).

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Dataset Name: **FY 1999 Planning Data**

Date of Dataset: **9/20/1999**

Page 3 of 24

# *Project Baseline Summary Report*

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LLW generation will continue for the life of the INEEL. Commercial LLW volume reduction and management of the RWMC SDA will be transferred to PBS ID-WM-107, Long Term Treatment/Storage/Disposal Operations beginning in FY2007.

Centralized planning and coordination of SCW will be transferred to PBS ID-WM-107, Long Term Treatment/Storage/Disposal Operations beginning in FY2007. The waste generators will be responsible for waste disposition costs.

HW generation will continue for the life of the INEEL. Commercial treatment and disposal facilities will continue to be utilized. Operation of the remaining hazardous waste storage facility (CPP-1619) and shipment coordination services will be transferred to PBS ID-WM-107, Long Term Treatment/Storage/Disposal Operations beginning in FY2007.

The activities in WGS Integration Project will continue as long as waste operations are needed at the INEEL. In FY 2006, each of the activities will be fully developed and will require only ongoing maintenance. After FY 2006, these activities will be transferred to ID-WM-107, Long-Term Treatment/Storage/Disposal.

### **Project End State**

MLLW, LLW, SCW, and HW generation will continue for the life of the INEEL. A significant portion of these wastes will be dispositioned within the FY2006 Plan period. However, some services will extend up to FY2050. The final end state is to have all waste treated and disposed. Buildings will have been turned over to other programs for demolition or reuse. No legacy waste issues will remain.

Treatment of the MLLW backlog associated with this PBS will be completed, along with significant volumes of DOE Complex-wide MLLW. Portions of the INEEL STP dealing with WROC MLLW treatments are marked complete. WROC MLLW treatment facilities and two MLLW storage facilities (WWSB and CPP-1617) were closed under RCRA (beginning in FY2004). The remaining MLLW storage facility (MWSF) was closed (beginning in 2011) when MLLW storage was transferred to Type II storage module at the RWMC. Buildings have been turned over for demolition or reuse. MLLW will be generated on the INEEL as long as nuclear operations continue. Current activities and future programs are expected to generate MLLW through 2050. Future generation of MLLW will be treated by the AMWTP.

The RWMC SDA CH LLW active disposal cell has been filled and the area was closed. LLW will be generated on the INEEL as long as nuclear operations continue. Current activities and future programs are expected to generate LLW through 2050. LLW volume reduction and disposal operations will be conducted at an offsite DOE or commercial facility. Special case waste has been dispositioned, primarily through shipment of material to an offsite geologic repository.

Hazardous waste will be generated in limited amounts due to the close of operations at the INEEL. Hazardous waste generated during D&D activities would be shipped directly from the generator to an off site treatment/disposal facility. HW storage facilities will be turned over for demolition or reuse.

### **Cost Baseline Comments:**

A detailed activity based cost estimate was performed for each activity. The detailed estimates are for specific activities that must be performed to accomplish the project activities in full compliance with the Federal, State, and local regulations. The activities and costs were verified by a senior internal review board and rolled into a resource-loaded schedule that reflects current baseline compliant operations. Waste Operations has of

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Dataset Name: **FY 1999 Planning Data**

Date of Dataset: **9/20/1999**

Page 4 of 24

# *Project Baseline Summary Report*

Data Source: **EM CDB**

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## **Project Description Narratives**

projectized activities to obtain further efficiencies. In completing the compliance baseline, an integral component of the projectization will be to perform a critical analysis of our estimate by an independent review team. The cost estimates are based on FY1999 dollars with escalation of 2.7% applied annually on a compound basis to FY2006.

The cost baseline in this PBS does not include a charge back strategy for billing DOE sites for MLLW treatment services. This strategy may be modified once chargeback issues have been resolved throughout the complex.

### **Safety & Health Hazards:**

INEEL personnel participate in the Voluntary Protection Program, Integrated Safety Management System, and the Operation Excellence Program. They are aware and support the ideals that their personnel safety begins with their own attitude.

Hazards are documented and addressed in hazard analyses, Safety Analysis Reports, a Health and Safety Program, and operation documentation (i.e. Radiological Work Permit, Safe Work Permit, Confined Space Permit, etc.). Hazards are mitigated by job planning and during operations by incorporating engineered controls (e.g. ventilation), the use of personnel protective equipment, monitoring, training, work procedures, and the INEEL ALARA Program.

This project, currently in the operational phase, contains the S&H functions necessary to treat, store, and or dispose of mixed low level (MLLW), hazardous, low level (LLW) and industrial wastes at the INEEL. This project manages and operates the facilities necessary to perform the INEEL missions for the aforementioned waste streams. The facilities are located at three (RWMC, INTEC, and WROC/PBF) different areas on the INEEL at distances up to 10 miles. Unit operations that are conducted under this project include waste container handling (manual, forklift, crane and trucking), waste incineration, waste compaction (hydraulic press), large component size reduction (cutting, grinding, sawing), chemical stabilization using mixers/cement type solidification, lead storage and shallow disposal operations. Hazards associated with the operation activities of this project include industrial, chemical, radiation exposure and risk to workers who operate in industrial facilities. Radiological and chemical exposure can occur during waste processing, ash handling, and material handling as well as a result of a fire, spill, or other unplanned event.

At the end state of this project, the hazards are mitigated due to the completion of treatment and the disposal of the waste.

This project's task dismantlement activities pose an additional risk to personnel concerning the uptake of airborne lead particles. Although this PBS provides for dismantlement activities it does not evaluate the hazards that are associated with the activity. The INEEL Test Area North (TAN) performs these activities in accordance with LMITCO procedure MCP 2720.

### **Safety & Health Work Performance:**

The resources necessary to accomplish MLLW treatment and LLW volume reduction safely is provided through the funding authorization for this project. Resources necessary for S&H oversight for disposal of LLW at the Radioactive Waste Management Complex (RWMC) is supported by the tenant facility and PBS WM-103 - INEEL TRU Waste Program. S&H resources within this project are planned and resource loaded into the project management software on a life cycle basis.

Activities within this project have been classified as less than Category III under DOE Order 5480.22, therefore, new MLLW treatment activities do not require an Operational Readiness Assessment. The project will perform a Management Assessment of all new waste treatment processes prior to

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Dataset Name: **FY 1999 Planning Data**

Date of Dataset: **9/20/1999**

Page 5 of 24

# *Project Baseline Summary Report*

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operations.

S&H resources necessary to accomplish MLLW treatment activities include pre job safety, radiological, and quality reviews; at the job S&H inspections; daily, weekly, and monthly surveys in S&H areas; continual hazard analysis of high personnel risk activities (ash handling, MLLW repackaging). There is no appreciable change in S&H resource requirements during the operational phase of this project. Upon completion of MLLW treatment that is scheduled for this project, closure will commence.

Cask dismantlement at TAN and other lead handling activities are addressed by a LMITCO internal Compliance Plan. Industrial, radiological, and medical hazards are outlined by this document, as well as the protective equipment required. Continuous monitoring of activities by work supervisors and cognizant professionals help mitigate the possibility of worker exposure to lead.

S&H resources necessary for RCRA closure are included in PBS ID-ER-110 - Decontamination & Decommissioning (D&D). S&H resources necessary for future treatment of MLLW and disposal of LLW, after 2006, are included in the Long Term Treatment/Storage/Disposal Operations project (ID-WM-107) and the AMWTP Production Operations project (ID-WM-105).

The average cost per FTE assumed (burdened rate) is \$85K/year for Industrial Safety, \$82K/year for Industrial Hygiene, \$89K/year Radiological Engineering, \$65K/year for Radiological Control Technician, and \$84K/year for Fire Protection.

### **PBS Comments:**

Efforts are currently underway to evaluate closure of the RWMC SDA prior to 2006. Joint Waste Operations and Environmental Restoration task teams have been chartered to develop the strategy, along with a project based work plan to implement the strategy. The work plan (technical, cost, schedule) will then be integrated into specific 2006 Plan Project Baseline Summaries identified for the INEEL. The strategy will include optimization of the remaining capacity of the RWMC SDA based on: cost effectiveness, compliance with the PA limits, maintaining adequate capacity for critical customers, and filling the remaining capacity by 2003.

The LLW Quantity Table show disposition of the LLW backlog by the end of FY1999. This creates a significant spike in the quantity of sizable and non-volume reducable LLW requiring processing or shipment in FY1999. Current baseline funding does not support these values; however, efforts are underway to evaluate process changes which could result in increased throughput without significant increase in costs. Examples include: use of soft bags for disposal of large quantities of LLW and revision of the selection criteria for when it is cost effective for size reduction (i.e., do not size materials which give less than a 10 to 1 volume reduction).

### **Baseline Validation Narrative:**

DOE-ID conducted a budget review of the Waste Operations Program baseline for FY 1999 and FY 2000. Comments were provided to the M&O on September 9, 1998 via letter from Lori Fritz to Michael Wolters (CF&AO-EBSD-JB/KDL-98-071), "FY 1999 Baseline Validation." The objective was to determine whether the M&O supporting documentation is current, accurate, complete and is relevant and reasonable. The baseline documentation was conditionally approved pending revision to address the comments attached to the above referenced letter. Comments were incorporated into the baseline and it was resubmitted to DOE-ID. Final baseline approval was received from DOE-ID December 21, 1998 via letter from Lori Fritz to Michael Wolters (CF&AO-EBSD-KDL-99-009) "FY 1999 Waste Operations Program Baseline Approval."

In addition, a joint senior level DOE-ID and LMITCO Independent Murder Board Review of the INEEL decision units was conducted February 13, 1996. Six teams consisting of six members reviewed the scope, schedule, cost estimates, and basis of estimates for each of the decision units which are the same base elements used to construct the PBS.

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Dataset Name: **FY 1999 Planning Data**

Date of Dataset: **9/20/1999**

Page 6 of 24

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Data Source: EM CDB

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## Project Description Narratives

### General PBS Information

Project Validated?

Date Validated:

Has Headquarters reviewed and approved project?

No

Date Project was Added: 12/1/1997

Baseline Submission Date:

FEDPLAN Project? Yes

| Drivers: | CERCLA | RCRA | DNFSB | AEA | UMTRCA | State | DOE Orders | Other |
|----------|--------|------|-------|-----|--------|-------|------------|-------|
|          | Y      | Y    | Y     | Y   | N      | Y     | Y          | N     |

### Project Identification Information

DOE Project Manager: Jeff T. Shadley

DOE Project Manager Phone Number: 208-526-5005

DOE Project Manager Fax Number: 208-526-0160

DOE Project Manager e-mail address: shadlejt@id.doe.gov

Is this a High Visibility Project (Y/N):

## Planning Section

### Baseline Costs (in thousands of dollars)

|  | 1997-2006<br>Total | 2007-2070<br>Total | 1997-2070<br>Total | 1997   | Actual<br>1997 | 1998   | Actual<br>1998 | 1999   | 2000   | 2001   | 2002   | 2003   | 2004   | 2005   | 2006   |
|--|--------------------|--------------------|--------------------|--------|----------------|--------|----------------|--------|--------|--------|--------|--------|--------|--------|--------|
| PBS Baseline (current year dollars)    | 227,699            | 0                  | 227,699            | 21,908 | 23,615         | 22,011 | 21,588         | 25,766 | 22,839 | 30,329 | 27,487 | 27,371 | 15,532 | 17,237 | 17,219 |
| PBS Baseline (constant 1999 dollars)   | 215,408            | 0                  | 215,408            | 21,908 | 23,615         | 22,011 | 21,588         | 25,766 | 22,239 | 28,924 | 25,675 | 25,040 | 13,917 | 15,127 | 14,801 |
| PBS EM Baseline (current year dollars) | 227,699            | 0                  | 227,699            | 21,908 | 23,615         | 22,011 | 21,588         | 25,766 | 22,839 | 30,329 | 27,487 | 27,371 | 15,532 | 17,237 | 17,219 |

Dataset Name: FY 1999 Planning Data

Page 7 of 24

Date of Dataset: 9/20/1999

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Site Summary Level: Idaho National Engineering and Environmental Laboratory

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## Baseline Costs (in thousands of dollars)

|   | 1997-2006<br>Total | 2007-2070<br>Total | 1997-2070<br>Total | 1997   | Actual<br>1997 | 1998          | Actual<br>1998 | 1999          | 2000          | 2001          | 2002          | 2003          | 2004          | 2005          | 2006          |               |
|---|--------------------|--------------------|--------------------|--------|----------------|---------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| PBS EM Baseline<br>(constant 1999<br>dollars) | 215,408            | 0                  | 215,408            | 21,908 | 23,615         | 22,011        | 21,588         | 25,766        | 22,239        | 28,924        | 25,675        | 25,040        | 13,917        | 15,127        | 14,801        |               |
|   | 2007               | 2008               | 2009               | 2010   | 2011-<br>2015  | 2016-<br>2020 | 2021-<br>2025  | 2026-<br>2030 | 2031-<br>2035 | 2036-<br>2040 | 2041-<br>2045 | 2046-<br>2050 | 2051-<br>2055 | 2056-<br>2060 | 2061-<br>2065 | 2066-<br>2070 |
| PBS Baseline (current<br>year dollars)        | 0                  | 0                  | 0                  | 0      | 0              | 0             | 0              | 0             | 0             | 0             | 0             | 0             | 0             | 0             | 0             | 0             |
| PBS Baseline<br>(constant 1999<br>dollars)    | 0                  | 0                  | 0                  | 0      | 0              | 0             | 0              | 0             | 0             | 0             | 0             | 0             | 0             | 0             | 0             | 0             |
| PBS EM Baseline<br>(current year dollars)     | 0                  | 0                  | 0                  | 0      | 0              | 0             | 0              | 0             | 0             | 0             | 0             | 0             | 0             | 0             | 0             | 0             |
| PBS EM Baseline<br>(constant 1999<br>dollars) | 0                  | 0                  | 0                  | 0      | 0              | 0             | 0              | 0             | 0             | 0             | 0             | 0             | 0             | 0             | 0             | 0             |

## Baseline Escalation Rates

| 1997  | 1998      | 1999      | 2000      | 2001      | 2002      | 2003      | 2004      | 2005      | 2006      | 2007      | 2008      | 2009      |
|-------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 0.00% | 0.00%     | 0.00%     | 2.70%     | 2.10%     | 2.10%     | 2.10%     | 2.10%     | 2.10%     | 2.10%     | 2.10%     | 2.10%     | 2.10%     |
| 2010  | 2011-2015 | 2016-2020 | 2021-2025 | 2026-2030 | 2031-2035 | 2036-2040 | 2041-2045 | 2046-2050 | 2051-2055 | 2056-2060 | 2061-2065 | 2066-2070 |
| 2.10% | 2.10%     | 2.10%     | 2.10%     | 2.10%     | 2.10%     | 2.10%     | 2.10%     | 2.10%     | 2.10%     | 2.10%     | 2.10%     | 2.10%     |

## Project Reconciliation

### Project Completion Date Changes:

Dataset Name: FY 1999 Planning Data

Page 8 of 24

Date of Dataset: 9/20/1999

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Data Source: EM CDB

Operations/Field Office: Idaho

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## Project Reconciliation

Previously Projected End Date of Project: 9/1/2006

Current Projected End Date of Project: 9/30/2006

Explanation of Project Completion Date Difference (if applicable):

N/A

## Project Cost Estimates (in thousands of dollars)

|  |         |                   |        |                   |        |
|--|---------|-------------------|--------|-------------------|--------|
| Previously Estimated Lifecycle Cost (1997 - 2070, 1998 Dollars): | 193,491 | Actual 1997 Cost: | 23,615 | Actual 1998 Cost: | 21,588 |
|--|---------|-------------------|--------|-------------------|--------|

|   |         |  |       |
|---|---------|--|-------|
| Previously Estimated Lifecycle Cost of Project (1999 - 2070, 1998 Dollars): | 148,288 | Inflation Adjustment (2.7% to convert 1998 to 1999 dollars): | 4,004 |
|---|---------|--|-------|

|  |         |
|--|---------|
| Previously Estimated Lifecycle Cost (1999 - 2070, 1999 Dollars): | 152,292 |
|--|---------|

## Project Cost Changes

|   | Cost Adjustments | Reconciliation Narratives   |
|---|------------------|---|
| Cost Change Due to Scope Deletions (-):                       | 7,312            | Unidentified GPP contingency (FY05-06). Waste Generator Services(WGS) x-fer to HLW (FY01-06). |
| Cost Reductions Due to Efficiencies (-):                      |                  |   |
| Cost Associated with New Scope (+):                           | 26,510           | Transfer of WGS scope from ID-WM-108; WERF MACT upgrade contingency.                          |
| Cost Growth Associated with Scope Previously Reported (+):    |                  |   |
| Cost Reductions Due to Science & Technology Efficiencies (-): |                  |   |
| Subtotal:   | 171,490          |   |
| Additional Amount to Reconcile (+):                           | -1               |   |

|   |         |
|---|---------|
| Current Estimated Lifecycle Cost (1999 - 2070, 1999 Dollars): | 171,489 |
|---|---------|

## Milestones

| Milestone/Activity | Field Milestone Code | Original Date | Baseline Date | Legal Date | Forecast Date | Actual Date | EA | DNFSB | Mgmt. Commit. | Key Decision | Intersite |
|--------------------|----------------------|---------------|---------------|------------|---------------|-------------|----|-------|---------------|--------------|-----------|
| Deliver Annual STP | 35N1MCH              |               | 11/16/1998    |            |               | 11/16/1998  | Y  |       |               |              |           |
| Deliver Annual STP | 35N1MCS              |               | 11/16/1999    | 11/15/1999 |               |             | Y  |       |               |              |           |

Dataset Name: FY 1999 Planning Data

Page 9 of 24

Date of Dataset: 9/20/1999

# Project Baseline Summary Report

Data Source: **EM CDB**

Operations/Field Office: **Idaho**

Site Summary Level: **Idaho National Engineering and Environmental Laboratory**

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| Milestone/Activity   | Field Milestone Code | Original Date | Baseline Date | Legal Date | Forecast Date | Actual Date | EA | DNFSB | Mgmt. Commit. | Key Decision | Intersite |
|--|----------------------|---------------|---------------|------------|---------------|-------------|----|-------|---------------|--------------|-----------|
| Deliver Annual STP Update                                      | 35N1MFR              |               | 11/16/1998    |            |               | 11/16/1998  | Y  |       |               |              |           |
| Deliver Annual STP Update                                      | 35N1MFS              |               | 11/16/1999    | 11/15/1999 |               |             | Y  |       |               |              |           |
| Issue ID Haz Waste Generator Annual Report                     | 319RNGQ              |               | 1/31/2000     |            |               |             |    |       |               |              |           |
| Issue ID Hazardous Wst Generator Annual Report                 | 319RNGN              |               | 1/28/1999     |            |               |             |    |       |               |              |           |
| LT S&M Completion (If applicable)                              | LTSMC                |               | 9/1/2050      |            |               |             |    |       |               |              |           |
| P4 - HG Retort - Establish Contracts                           | 35N1MGG              |               | 12/23/1999    | 12/31/1999 |               |             | Y  |       |               |              |           |
| P4 - Sizing/Opening/Segregation - Commence System Testing      | G0RICE5              |               | 12/31/1998    | 12/31/1998 |               | 11/19/1998  | Y  |       |               |              |           |
| P5 - HG Retort - Ship Waste Offsite for Treatment              | 35N1MGH              |               | 3/30/2000     | 3/31/2000  |               |             | Y  |       |               |              |           |
| P5 - Macroencapsulation - Commence Operations                  | G0RICLL              |               | 3/31/1999     |            |               |             |    |       |               |              |           |
| P5 - Sizing/Opening/Segregation - Commence Operations          | G0RICAC              |               | 6/30/1999     |            |               |             |    |       |               |              |           |
| P6 - HG Retort - Submit Backlog Schedule for Offsite Treatment | 35N1MGI              |               | 6/29/2000     | 6/30/2000  |               |             | Y  |       |               |              |           |
| P6 - Macroencapsulation - Backlog Schedule                     | G0RICKB              |               | 9/30/1999     |            |               |             |    |       |               |              |           |
| P6-1 Incineration 25% Backlog Complete                         | G0RICLB              |               | 9/30/1999     | 9/30/1999  |               |             | Y  |       |               |              |           |
| P6-1 Stabilization 25% Backlog Complete                        | G0RICLF              |               | 9/30/2001     | 9/30/2001  |               |             | Y  |       |               |              |           |
| P6-2 Incineration 50% Backlog Complete                         | G0RICLC              |               | 9/30/2000     | 9/30/2000  |               |             | Y  |       |               |              |           |
| P6-2 Stabilization 50% Backlog Complete                        | G0RICLG              |               | 9/30/2003     | 9/30/2003  |               |             | Y  |       |               |              |           |
| P6-3 - Cask Dismantlement - 75% Backlog Complete               | 315A94W              |               | 9/30/1999     | 9/30/1999  |               |             | Y  |       |               |              |           |
| P6-3 Incineration 75% Backlog Complete                         | G0RICLD              |               | 9/30/2001     | 9/30/2001  |               |             | Y  |       |               |              |           |
| P6-3 Stabilization 75% Backlog Complete                        | G0RICLH              |               | 9/30/2004     | 9/30/2004  |               |             | Y  |       |               |              |           |
| P6-4 Cask Dismantlement 100% Complete                          | 315A94X              |               | 9/30/2001     | 9/30/2001  |               |             | Y  |       |               |              |           |

Dataset Name: **FY 1999 Planning Data**

Date of Dataset: **9/20/1999**

# Project Baseline Summary Report

Data Source: **EM CDB**

Operations/Field Office: **Idaho**

Site Summary Level: **Idaho National Engineering and Environmental Laboratory**

Project **ID-WM-101 / INEEL LLW/MLLW/Other Waste Program**

Report Number: **GEN-01b**

Print Date: **3/10/2000**

HQ ID: **0570**

## Milestones

| Milestone/Activity                                    | Field Milestone Code | Original Date | Baseline Date | Legal Date | Forecast Date | Actual Date | EA | DNFSB | Mgmt. Commit. | Key Decision | Intersite |
|---|----------------------|---------------|---------------|------------|---------------|-------------|----|-------|---------------|--------------|-----------|
| P6-4 Incineration 100% Backlog Complete               | G0RICLE              |               | 9/30/2003     | 9/30/2003  |               |             | Y  |       |               |              |           |
| P6-4 Stabilization 100% Backlog Complete              | G0RICLI              |               | 9/30/2006     | 9/30/2006  |               |             | Y  |       |               |              |           |
| Project Mission Complete                              | PMC                  |               | 9/30/2006     |            |               |             |    |       |               |              |           |
| Submit RCRA Recycling Report                          | 39L723H              |               | 2/15/1999     |            |               |             |    |       |               |              |           |
| Submit RCRA Recycling Report                          | 39L723X              |               | 2/14/2000     |            |               |             |    |       |               |              |           |
| Submit RCRA Recycling Report                          | 39L724L              |               | 2/15/2001     |            |               |             |    |       |               |              |           |
| Submit RCRA Recycling Report                          | 39L724M              |               | 2/18/2002     |            |               |             |    |       |               |              |           |
| Submit RCRA Recycling Report                          | 39L724N              |               | 2/17/2003     |            |               |             |    |       |               |              |           |
| Submit RCRA Recycling Report                          | 39L7259              |               | 2/16/2004     |            |               |             |    |       |               |              |           |
| Submit RCRA Recycling Report                          | 39L725A              |               | 2/15/2005     |            |               |             |    |       |               |              |           |
| Submit RCRA Recycling Report                          | 39L725B              |               | 2/15/2006     |            |               |             |    |       |               |              |           |
| ISSUE INEEL NON-RADIOLOGICAL WASTE INFORMATION REPORT |                      |               | 8/31/1999     |            |               |             |    |       |               |              |           |
| ISSUE INEEL RADIOACTIVE WASTE INFORMATIONREPORT       |                      |               | 7/30/1999     |            |               |             |    |       |               |              |           |
| SUBMIT INEEL HAZARDOUS WASTE REPORT TO STATE OF IDAHO |                      |               | 1/31/1999     |            |               |             |    |       |               |              |           |
| Dispose of up to 6,5000 m3 of LLW                     |                      |               | 9/30/1999     |            |               |             |    |       |               |              |           |
| Dispose of up to 870 m3 of LLW                        |                      |               | 9/30/2000     |            |               |             |    |       |               |              |           |
| Dispose of up to 862 m3 of LLW                        |                      |               | 9/30/2001     |            |               |             |    |       |               |              |           |
| dispose of up to 866 m3 of LLW                        |                      |               | 9/30/2002     |            |               |             |    |       |               |              |           |
| Dispose of up to 866 m3 of LLW                        |                      |               | 9/30/2003     |            |               |             |    |       |               |              |           |
| Dispose of up to 1547 m3 of LLW                       |                      |               | 9/30/2004     |            |               |             |    |       |               |              |           |
| Dispose of up to 1547 m3 of LLW                       |                      |               | 9/30/2005     |            |               |             |    |       |               |              |           |

Dataset Name: **FY 1999 Planning Data**

Date of Dataset: **9/20/1999**

# Project Baseline Summary Report

Data Source: **EM CDB**

Operations/Field Office: **Idaho**

Site Summary Level: **Idaho National Engineering and Environmental Laboratory**

Project **ID-WM-101 / INEEL LLW/MLLW/Other Waste Program**

Report Number: **GEN-01b**

Print Date: **3/10/2000**

HQ ID: **0570**

## Milestones

| Milestone/Activity                            | Field Milestone Code | Original Date | Baseline Date | Legal Date | Forecast Date | Actual Date | EA | DNFSB | Mgmt. Commit. | Key Decision | Intersite |
|---|----------------------|---------------|---------------|------------|---------------|-------------|----|-------|---------------|--------------|-----------|
| Dispose of up to 1547 m3 of LLW               |                      |               | 9/30/2006     |            |               |             |    |       |               |              |           |
| Submit quarterly Corrective Action Update     |                      |               | 1/26/1999     |            |               |             |    | Y     |               |              |           |
| Submit quarterly Corrective Action Update     |                      |               | 4/27/1999     |            |               |             |    | Y     |               |              |           |
| Submit quarterly Corrective Action Update     |                      |               | 7/23/1999     |            |               |             |    | Y     |               |              |           |
| Submit quarterly Corrective Action Update     |                      |               | 11/23/1999    |            |               |             |    | Y     |               |              |           |
| Submit Composite Analysis Annual Report       |                      |               | 9/30/1999     |            |               |             |    |       |               |              |           |
| Submit Annual Performance Assessment Report   |                      |               | 9/30/1999     |            |               |             |    |       |               |              |           |
| Complete Corrective Action Plan               |                      |               | 9/28/2001     |            |               |             |    | Y     |               |              |           |
| Submit Final Performance Assessment to DOE-HQ |                      |               | 9/30/2004     |            |               |             |    |       |               |              |           |
| Project Start                                 |                      |               | 10/1/1996     |            |               |             |    |       |               |              |           |

## Milestones - Part II

| Milestone/Activity                             | Field Milestone Code | Critical Decision | Critical Closure Path | Project Start | Project End | Mission Complete | Tech Risk | Work Scope Risk | Intersite Risk | Cancelled | Milestone Description |
|--|----------------------|-------------------|-----------------------|---------------|-------------|------------------|-----------|-----------------|----------------|-----------|-----------------------|
| Deliver Annual STP                             | 35N1MCH              |                   |                       |               |             |                  |           |                 |                |           |                       |
| Deliver Annual STP                             | 35N1MCS              |                   |                       |               |             |                  |           |                 |                |           |                       |
| Deliver Annual STP Update                      | 35N1MFR              |                   |                       |               |             |                  |           |                 |                |           |                       |
| Deliver Annual STP Update                      | 35N1MFS              |                   |                       |               |             |                  |           |                 |                |           |                       |
| Issue ID Haz Waste Generator Annual Report     | 319RNGQ              |                   |                       |               |             |                  |           |                 |                |           |                       |
| Issue ID Hazardous Wst Generator Annual Report | 319RNGN              |                   |                       |               |             |                  |           |                 |                |           |                       |
| LT S&M Completion (If applicable)              | LTSMC                |                   |                       |               |             |                  |           |                 |                |           |                       |

Dataset Name: **FY 1999 Planning Data**

Date of Dataset: **9/20/1999**

# Project Baseline Summary Report

Data Source: **EM CDB**

Operations/Field Office: **Idaho**

Site Summary Level: **Idaho National Engineering and Environmental Laboratory**

Project **ID-WM-101 / INEEL LLW/MLLW/Other Waste Program**

Report Number: **GEN-01b**

Print Date: **3/10/2000**

HQ ID: **0570**

## Milestones - Part II

| Milestone/Activity   | Field Milestone Code | Critical Decision | Critical Closure Path | Project Start | Project End | Mission Complete | Tech Risk | Work Scope Risk | Intersite Risk | Cancelled | Milestone Description   |
|--|----------------------|-------------------|-----------------------|---------------|-------------|------------------|-----------|-----------------|----------------|-----------|---|
| P4 - HG Retort - Establish Contracts                           | 35N1MGG              |                   |                       |               |             |                  |           |                 |                |           |   |
| P4 - Sizing/Opening/Segregation - Commence System Testing      | G0RICE5              |                   |                       |               |             |                  |           |                 |                |           |   |
| P5 - HG Retort - Ship Waste Offsite for Treatment              | 35N1MGH              |                   |                       |               |             |                  |           |                 |                |           |   |
| P5 - Macroencapsulation - Commence Operations                  | G0RICLL              |                   |                       |               |             |                  |           |                 |                |           | This milestone deliverable date is a planning date. Current INEEL Site Treatment Plan deliverable has no enforceable deliverable. |
| P5 - Sizing/Opening/Segregation - Commence Operations          | G0RICAC              |                   |                       |               |             |                  |           |                 |                |           | This milestone deliverable date is a planning date. Current INEEL Site Treatment Plan deliverable has no enforceable deliverable. |
| P6 - HG Retort - Submit Backlog Schedule for Offsite Treatment | 35N1MGI              |                   |                       |               |             |                  |           |                 |                |           |   |
| P6 - Macroencapsulation - Backlog Schedule                     | G0RICKB              |                   |                       |               |             |                  |           |                 |                |           | This milestone deliverable date is a planning date. Current INEEL Site Treatment Plan deliverable has no enforceable deliverable. |
| P6-1 Incineration 25% Backlog Complete                         | G0RICLB              |                   |                       |               |             |                  |           |                 |                |           |   |
| P6-1 Stabilization 25% Backlog Complete                        | G0RICLF              |                   |                       |               |             |                  |           |                 |                |           |   |
| P6-2 Incineration 50% Backlog Complete                         | G0RICLC              |                   |                       |               |             |                  |           |                 |                |           |   |
| P6-2 Stabilization 50% Backlog Complete                        | G0RICLG              |                   |                       |               |             |                  |           |                 |                |           |   |
| P6-3 - Cask Dismantlement -                                    | 315A94W              |                   |                       |               |             |                  |           |                 |                |           |   |

Dataset Name: **FY 1999 Planning Data**

Date of Dataset: **9/20/1999**

# Project Baseline Summary Report

Data Source: **EM CDB**

Operations/Field Office: **Idaho**

Site Summary Level: **Idaho National Engineering and Environmental Laboratory**

Project **ID-WM-101 / INEEL LLW/MLLW/Other Waste Program**

Report Number: **GEN-01b**

Print Date: **3/10/2000**

HQ ID: **0570**

## Milestones - Part II

| Milestone/Activity                                    | Field Milestone Code | Critical Decision | Critical Closure Path | Project Start | Project End | Mission Complete | Tech Risk | Work Scope Risk | Intersite Risk | Cancelled | Milestone Description  |
|---|----------------------|-------------------|-----------------------|---------------|-------------|------------------|-----------|-----------------|----------------|-----------|--|
| 75% Backlog Complete                                  |                      |                   |                       |               |             |                  |           |                 |                |           |  |
| P6-3 Incineration 75% Backlog Complete                | G0RICLD              |                   |                       |               |             |                  |           |                 |                |           |  |
| P6-3 Stabilization 75% Backlog Complete               | G0RICLH              |                   |                       |               |             |                  |           |                 |                |           |  |
| P6-4 Cask Dismantlement 100% Complete                 | 315A94X              |                   |                       |               |             |                  |           |                 |                |           |  |
| P6-4 Incineration 100% Backlog Complete               | G0RICLE              |                   |                       |               |             |                  |           |                 |                |           |  |
| P6-4 Stabilization 100% Backlog Complete              | G0RICLI              |                   |                       |               |             |                  |           |                 |                |           |  |
| Project Mission Complete                              | PMC                  |                   |                       |               | Y           |                  |           |                 |                |           |  |
| Submit RCRA Recycling Report                          | 39L723H              |                   |                       |               |             |                  |           |                 |                |           |  |
| Submit RCRA Recycling Report                          | 39L723X              |                   |                       |               |             |                  |           |                 |                |           |  |
| Submit RCRA Recycling Report                          | 39L724L              |                   |                       |               |             |                  |           |                 |                |           |  |
| Submit RCRA Recycling Report                          | 39L724M              |                   |                       |               |             |                  |           |                 |                |           |  |
| Submit RCRA Recycling Report                          | 39L724N              |                   |                       |               |             |                  |           |                 |                |           |  |
| Submit RCRA Recycling Report                          | 39L7259              |                   |                       |               |             |                  |           |                 |                |           |  |
| Submit RCRA Recycling Report                          | 39L725A              |                   |                       |               |             |                  |           |                 |                |           |  |
| Submit RCRA Recycling Report                          | 39L725B              |                   |                       |               |             |                  |           |                 |                |           |  |
| ISSUE INEEL NON-RADIOLOGICAL WASTE INFORMATION REPORT |                      |                   |                       |               |             |                  |           |                 |                |           | Issue Non-Radiological Waste Report for the INEEL to DOE-ID (DOE/ID 10057). Report is issued on an annual bases. |
| ISSUE INEEL RADIOACTIVE WASTE INFORMATIONREPORT       |                      |                   |                       |               |             |                  |           |                 |                |           | Issue to DOE/ID the INEEL Radioactive Waste Information  |

Dataset Name: **FY 1999 Planning Data**

Date of Dataset: **9/20/1999**

Page 14 of 24

# Project Baseline Summary Report

Data Source: **EM CDB**

Operations/Field Office: **Idaho**

Site Summary Level: **Idaho National Engineering and Environmental Laboratory**

Project **ID-WM-101 / INEEL LLW/MLLW/Other Waste Program**

Report Number: **GEN-01b**

Print Date: **3/10/2000**

HQ ID: **0570**

## Milestones - Part II

| Milestone/Activity                                    | Field Milestone Code | Critical Decision | Critical Closure Path | Project Start | Project End | Mission Complete | Tech Risk | Work Scope Risk | Intersite Risk | Cancelled | Milestone Description                                      |
|---|----------------------|-------------------|-----------------------|---------------|-------------|------------------|-----------|-----------------|----------------|-----------|--|
| SUBMIT INEEL HAZARDOUS WASTE REPORT TO STATE OF IDAHO |                      |                   |                       |               |             |                  |           |                 |                |           | Report (DOE/ID 0054). Report is issued on an annual bases. |
| Dispose of up to 6,5000 m3 of LLW                     |                      |                   |                       |               |             |                  |           |                 |                |           | Submit INEEL Hazardous Waste Generator Report to S         |
| Dispose of up to 870 m3 of LLW                        |                      |                   |                       |               |             |                  |           |                 |                |           |  |
| Dispose of up to 862 m3 of LLW                        |                      |                   |                       |               |             |                  |           |                 |                |           |  |
| dispose of up to 866 m3 of LLW                        |                      |                   |                       |               |             |                  |           |                 |                |           |  |
| Dispose of up to 866 m3 of LLW                        |                      |                   |                       |               |             |                  |           |                 |                |           |  |
| Dispose of up to 1547 m3 of LLW                       |                      |                   |                       |               |             |                  |           |                 |                |           |  |
| Dispose of up to 1547 m3 of LLW                       |                      |                   |                       |               |             |                  |           |                 |                |           |  |
| Dispose of up to 1547 m3 of LLW                       |                      |                   |                       |               |             |                  |           |                 |                |           |  |
| Submit quarterly Corrective Action Update             |                      |                   |                       |               |             |                  |           |                 |                |           |  |
| Submit quarterly Corrective Action Update             |                      |                   |                       |               |             |                  |           |                 |                |           |  |
| Submit quarterly Corrective Action Update             |                      |                   |                       |               |             |                  |           |                 |                |           |  |
| Submit quarterly Corrective Action Update             |                      |                   |                       |               |             |                  |           |                 |                |           |  |
| Submit Composite Analysis Annual Report               |                      |                   |                       |               |             |                  |           |                 |                |           |  |
| Submit Annual Performance Assessment Report           |                      |                   |                       |               |             |                  |           |                 |                |           |  |

Dataset Name: **FY 1999 Planning Data**

Date of Dataset: **9/20/1999**

# Project Baseline Summary Report

Data Source: EM CDB

Operations/Field Office: Idaho

Site Summary Level: Idaho National Engineering and Environmental Laboratory

Project ID-WM-101 / INEEL LLW/MLLW/Other Waste Program

Report Number: GEN-01b

Print Date: 3/10/2000

HQ ID: 0570

## Milestones - Part II

| Milestone/Activity                            | Field Milestone Code | Critical Decision | Critical Closure Path | Project Start | Project End | Mission Complete | Tech Risk | Work Scope Risk | Intersite Risk | Cancelled | Milestone Description   |  |  |  |
|---|----------------------|-------------------|-----------------------|---------------|-------------|------------------|-----------|-----------------|----------------|-----------|-------------------------|--|--|--|
| Complete Corrective Action Plan               |                      |                   |                       |               |             |                  |           |                 |                |           |                         |  |  |  |
| Submit Final Performance Assessment to DOE-HQ |                      |                   |                       |               |             |                  |           |                 |                |           |                         |  |  |  |
| Project Start                                 |                      |                   |                       | Y             |             |                  |           |                 |                |           | Project start milestone |  |  |  |

## Performance Measure Metrics

| Category/Subcategory | Units | 1997-2006 Total | 2007-2070 Total | 1997-2070 Total | Actual Pre-1997 | Planned 1997 | Actual 1997 | Planned 1998 | Planned 1999 | Planned 2000 | Planned 2001 | Planned 2002 | Planned 2003 | Planned 2004 |
|----------------------|-------|-----------------|-----------------|-----------------|-----------------|--------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| MLLW                 |       |                 |                 |                 |                 |              |             |              |              |              |              |              |              |              |
| Treatment            | M3    | 5,266.33        | 0.00            | 5,266.33        | 0.00            |              | 0.00        | 9.05         | 720.82       | 633.59       | 791.54       | 1,863.41     | 831.67       | 138.7        |
| MLLW                 |       |                 |                 |                 |                 |              |             |              |              |              |              |              |              |              |
| Storage              | M3    |                 |                 |                 |                 |              |             | 1,070.26     | 1,013.42     | 828.15       | 694.54       | 560.94       | 345.48       | 266.3        |
| MLLW                 |       |                 |                 |                 |                 |              |             |              |              |              |              |              |              |              |
| On-Site Disp.        | M3    | 0.00            | 0.00            | 0.00            | 0.00            |              | 0.00        |              |              |              |              |              |              |              |
| MLLW                 |       |                 |                 |                 |                 |              |             |              |              |              |              |              |              |              |
| Comm. Disp.          | M3    | 1,487.21        | 0.00            | 1,487.21        | 0.00            |              | 0.00        | 3.62         | 118.99       | 378.64       | 279.92       | 328.56       | 254.23       | 41.0         |
| MLLW                 |       |                 |                 |                 |                 |              |             |              |              |              |              |              |              |              |
| Ship to DOE Disp.    | M3    | 23.24           | 0.00            | 23.24           | 0.00            |              | 0.00        |              | 2.24         | 0.00         | 7.00         | 7.00         | 7.00         |              |
| MLLW                 |       |                 |                 |                 |                 |              |             |              |              |              |              |              |              |              |
| TBD Disp.            | M3    | 4.33            | 0.00            | 4.33            |                 |              |             | 0.00         | 0.87         | 0.87         | 0.87         | 0.87         | 0.87         |              |
| LLW                  |       |                 |                 |                 |                 |              |             |              |              |              |              |              |              |              |
| Treatment            | M3    | 24,088.31       | 0.00            | 24,088.31       | 0.00            |              | 0.00        | 0.00         | 6,741.06     | 3,046.98     | 2,430.61     | 2,246.86     | 2,384.32     | 2,383.1      |
| LLW                  |       |                 |                 |                 |                 |              |             |              |              |              |              |              |              |              |
| Storage              | M3    |                 |                 |                 |                 |              |             | 5,920.52     | 88.31        | 67.56        | 46.81        | 26.06        | 5.31         | 5.2          |

Dataset Name: FY 1999 Planning Data

Date of Dataset: 9/20/1999

# Project Baseline Summary Report

Data Source: EM CDB

Report Number: GEN-01b

Operations/Field Office: Idaho

Print Date: 3/10/2000

Site Summary Level: Idaho National Engineering and Environmental Laboratory

HQ ID: 0570

Project ID-WM-101 / INEEL LLW/MLLW/Other Waste Program

## Performance Measure Metrics

| Category/Subcategory | Units | 1997-2006<br>Total | 2007-2070<br>Total | 1997-2070<br>Total | Actual<br>Pre-1997 | Planned<br>1997 | Actual<br>1997  | Planned<br>1998 | Planned<br>1999           | Planned<br>2000           | Planned<br>2001           | Planned<br>2002           | Planned<br>2003           | Planned<br>2004 |
|----------------------|-------|--------------------|--------------------|--------------------|--------------------|-----------------|-----------------|-----------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|-----------------|
| LLW                  |       |                    |                    |                    |                    |                 |                 |                 |                           |                           |                           |                           |                           |                 |
| LLW                  |       |                    |                    |                    |                    |                 |                 |                 |                           |                           |                           |                           |                           |                 |
| On-Site Disp.        | M3    | 25,365.30          | 0.00               | 25,365.30          | 0.00               |                 | 0.00            | 0.00            | 10,110.74                 | 4,585.14                  | 2,348.42                  | 2,533.51                  | 2,867.66                  | 975.8           |
| LLW                  |       |                    |                    |                    |                    |                 |                 |                 |                           |                           |                           |                           |                           |                 |
| Ship to DOE Disp.    | M3    | 0.00               | 0.00               | 0.00               | 0.00               |                 | 0.00            |                 |                           |                           |                           |                           |                           |                 |
| LLW                  |       |                    |                    |                    |                    |                 |                 |                 |                           |                           |                           |                           |                           |                 |
| TBD Disp.            | M3    | 0.18               | 0.00               | 0.18               |                    |                 |                 |                 |                           |                           |                           |                           |                           | 0.0             |
| Category/Subcategory | Units | Planned<br>2004    | Planned<br>2005    | Planned<br>2006    | Planned<br>2007    | Planned<br>2008 | Planned<br>2009 | Planned<br>2010 | Planned<br>2011 -<br>2015 | Planned<br>2016 -<br>2020 | Planned<br>2021 -<br>2025 | Planned<br>2026 -<br>2030 | Planned<br>2031 -<br>2035 |                 |
| MLLW                 |       |                    |                    |                    |                    |                 |                 |                 |                           |                           |                           |                           |                           |                 |
| Treatment            | M3    | 138.75             | 138.75             | 138.75             |                    |                 |                 |                 |                           |                           |                           |                           |                           |                 |
| MLLW                 |       |                    |                    |                    |                    |                 |                 |                 |                           |                           |                           |                           |                           |                 |
| Storage              | M3    | 266.30             | 187.12             | 107.94             |                    |                 |                 |                 |                           |                           |                           |                           |                           |                 |
| MLLW                 |       |                    |                    |                    |                    |                 |                 |                 |                           |                           |                           |                           |                           |                 |
| On-Site Disp.        | M3    |                    |                    |                    |                    |                 |                 |                 |                           |                           |                           |                           |                           |                 |
| MLLW                 |       |                    |                    |                    |                    |                 |                 |                 |                           |                           |                           |                           |                           |                 |
| Comm. Disp.          | M3    | 41.08              | 41.08              | 41.08              |                    |                 |                 |                 |                           |                           |                           |                           |                           |                 |
| MLLW                 |       |                    |                    |                    |                    |                 |                 |                 |                           |                           |                           |                           |                           |                 |
| Ship to DOE Disp.    | M3    |                    |                    |                    |                    |                 |                 |                 |                           |                           |                           |                           |                           |                 |
| MLLW                 |       |                    |                    |                    |                    |                 |                 |                 |                           |                           |                           |                           |                           |                 |
| TBD Disp.            | M3    |                    |                    |                    |                    |                 |                 |                 |                           |                           |                           |                           |                           |                 |
| LLW                  |       |                    |                    |                    |                    |                 |                 |                 |                           |                           |                           |                           |                           |                 |
| Treatment            | M3    | 2,383.14           | 2,285.52           | 2,569.83           |                    |                 |                 |                 |                           |                           |                           |                           |                           |                 |

Dataset Name: FY 1999 Planning Data

Page 17 of 24

Date of Dataset: 9/20/1999

# Project Baseline Summary Report

Data Source: EM CDB

Operations/Field Office: Idaho

Site Summary Level: Idaho National Engineering and Environmental Laboratory

Project ID-WM-101 / INEEL LLW/MLLW/Other Waste Program

Report Number: GEN-01b

Print Date: 3/10/2000

HQ ID: 0570

| Category/Subcategory | Units | Planned<br>2004           | Planned<br>2005           | Planned<br>2006           | Planned<br>2007           | Planned<br>2008           | Planned<br>2009           | Planned<br>2010           | Planned<br>2011 -<br>2015 | Planned<br>2016 -<br>2020 | Planned<br>2021 -<br>2025 | Planned<br>2026 -<br>2030 | Planned<br>2031 -<br>2035 |
|----------------------|-------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|
| LLW                  |       |                           |                           |                           |                           |                           |                           |                           |                           |                           |                           |                           |                           |
| Storage              | M3    | 5.25                      | 5.19                      | 5.13                      |                           |                           |                           |                           |                           |                           |                           |                           |                           |
| LLW                  |       |                           |                           |                           |                           |                           |                           |                           |                           |                           |                           |                           |                           |
| On-Site Disp.        | M3    | 975.85                    | 966.47                    | 977.52                    |                           |                           |                           |                           |                           |                           |                           |                           |                           |
| LLW                  |       |                           |                           |                           |                           |                           |                           |                           |                           |                           |                           |                           |                           |
| Ship to DOE Disp.    | M3    |                           |                           |                           |                           |                           |                           |                           |                           |                           |                           |                           |                           |
| LLW                  |       |                           |                           |                           |                           |                           |                           |                           |                           |                           |                           |                           |                           |
| TBD Disp.            | M3    | 0.06                      | 0.06                      | 0.06                      |                           |                           |                           |                           |                           |                           |                           |                           |                           |
| Category/Subcategory | Units | Planned<br>2036 -<br>2040 | Planned<br>2041 -<br>2045 | Planned<br>2046 -<br>2050 | Planned<br>2051 -<br>2055 | Planned<br>2056 -<br>2060 | Planned<br>2061 -<br>2035 | Planned<br>2066 -<br>2070 | Exceptions                | Lifecycle<br>Total        |                           |                           |                           |
| MLLW                 |       |                           |                           |                           |                           |                           |                           |                           |                           |                           |                           |                           |                           |
| Treatment            | M3    |                           |                           |                           |                           |                           |                           |                           |                           | 4,984.26                  |                           |                           |                           |
| MLLW                 |       |                           |                           |                           |                           |                           |                           |                           |                           |                           |                           |                           |                           |
| Storage              | M3    |                           |                           |                           |                           |                           |                           |                           |                           |                           |                           |                           |                           |
| MLLW                 |       |                           |                           |                           |                           |                           |                           |                           |                           |                           |                           |                           |                           |
| On-Site Disp.        | M3    |                           |                           |                           |                           |                           |                           |                           |                           | 12.70                     |                           |                           |                           |
| MLLW                 |       |                           |                           |                           |                           |                           |                           |                           |                           |                           |                           |                           |                           |
| Comm. Disp.          | M3    |                           |                           |                           |                           |                           |                           |                           |                           | 1,439.60                  |                           |                           |                           |
| MLLW                 |       |                           |                           |                           |                           |                           |                           |                           |                           |                           |                           |                           |                           |
| Ship to DOE Disp.    | M3    |                           |                           |                           |                           |                           |                           |                           |                           | 42.41                     |                           |                           |                           |
| MLLW                 |       |                           |                           |                           |                           |                           |                           |                           |                           |                           |                           |                           |                           |
| TBD Disp.            | M3    |                           |                           |                           |                           |                           |                           |                           |                           | 3.47                      |                           |                           |                           |
| LLW                  |       |                           |                           |                           |                           |                           |                           |                           |                           |                           |                           |                           |                           |
| Treatment            | M3    |                           |                           |                           |                           |                           |                           |                           |                           | 24,136.61                 |                           |                           |                           |

Dataset Name: FY 1999 Planning Data

Date of Dataset: 9/20/1999

# Project Baseline Summary Report

Data Source: EM CDB

Operations/Field Office: Idaho

Site Summary Level: Idaho National Engineering and Environmental Laboratory

Project ID-WM-101 / INEEL LLW/MLLW/Other Waste Program

Report Number: GEN-01b

Print Date: 3/10/2000

HQ ID: 0570

| Category/Subcategory | Units | Planned<br>2036 -<br>2040 | Planned<br>2041 -<br>2045 | Planned<br>2046 -<br>2050 | Planned<br>2051 -<br>2055 | Planned<br>2056 -<br>2060 | Planned<br>2061 -<br>2035 | Planned<br>2066 -<br>2070 | Exceptions | Lifecycle<br>Total |
|----------------------|-------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|------------|--------------------|
| LLW                  |       |                           |                           |                           |                           |                           |                           |                           |            |                    |
| Storage              | M3    |                           |                           |                           |                           |                           |                           |                           |            |                    |
| LLW                  |       |                           |                           |                           |                           |                           |                           |                           |            |                    |
| On-Site Disp.        | M3    |                           |                           |                           |                           |                           |                           |                           |            | 23,189.92          |
| LLW                  |       |                           |                           |                           |                           |                           |                           |                           |            |                    |
| Ship to DOE Disp.    | M3    |                           |                           |                           |                           |                           |                           |                           |            | 2.00               |
| LLW                  |       |                           |                           |                           |                           |                           |                           |                           |            |                    |
| TBD Disp.            | M3    |                           |                           |                           |                           |                           |                           |                           |            | 0.18               |

## Technology Needs

Site Need Code: ID-3.1.31

Site Need Name: Dioxin, Mercury, and HCl/Cl2 Control for Incinerator Emissions for MACT Compliance.

Focus Area Work Package ID:

Focus Area Work Package:

Focus Area:

Agree with Technology Link: N

Benefits (Cost, Risk Reduction, Both): Risk Reduction

### Technologies

### Cost Savings (in thousands of dollars)

### Range of Estimate

Continuous Emissions Monitor of Dioxins

500

Medium

Site Need Code: ID-3.1.41

Site Need Name: WERF Fly Ash Stabilization

Focus Area Work Package ID: MW-04

Focus Area Work Package: Efficient Stabilization of High Metal Content Salts and Ash Waste

Focus Area: MWFA

Agree with Technology Link: Y

Dataset Name: FY 1999 Planning Data

Date of Dataset: 9/20/1999

Page 19 of 24

# Project Baseline Summary Report

Data Source: EM CDB

Operations/Field Office: Idaho

Site Summary Level: Idaho National Engineering and Environmental Laboratory

Project ID-WM-101 / INEEL LLW/MLLW/Other Waste Program

Report Number: GEN-01b

Print Date: 3/10/2000

HQ ID: 0570

## Technology Needs

Benefits (Cost, Risk Reduction, Both): Risk Reduction

### Technologies

Full Scale Mixed Waste Stabilization Demo

### Cost Savings (in thousands of dollars)

1,000

### Range of Estimate

Medium

### Related CCP Milestones

### Related Waste Streams

### Agree?

### Change?

02039: AAJ - Sludges/Liquids/Debris/Labpacks to WERF

Y

N

02076: -

Y

N

00791: -

Y

N

00776: A2 - HAZ-Soil

Y

N

00792: ABA - Commercial Incinerable LLW

Y

N

Site Need Code: ID-3.1.42

Site Need Name: Non Destructive Assay for RCRA metals and chlorine in WERF incinerator feed

Focus Area Work Package ID:

Focus Area Work Package:

Focus Area:

Agree with Technology Link: Y

Benefits (Cost, Risk Reduction, Both): Cost

### Technologies

### Cost Savings (in thousands of dollars)

### Range of Estimate

Characterization of RCRA Material Non-Destructive Assay Development

Characterization of Contact-Handled Waste Containers for RCRA Material using Pulsed Fast Thermal Neutron Analysis

Pulsed Gamma Neutron Activation Analysis (PGNAA) System for the Assay of RCRA Metals in Mixed Waste

Solutions for TRU Waste Streams without Disposition Options

### Related CCP Milestones

### Related Waste Streams

### Agree?

### Change?

02039: AAJ - Sludges/Liquids/Debris/Labpacks to WERF

Y

N

02056: ABA - MLLW from HLW to WERF Incin

Y

N

Dataset Name: FY 1999 Planning Data

Date of Dataset: 9/20/1999

# Project Baseline Summary Report

Data Source: EM CDB

Operations/Field Office: Idaho

Site Summary Level: Idaho National Engineering and Environmental Laboratory

Project ID-WM-101 / INEEL LLW/MLLW/Other Waste Program

Report Number: GEN-01b

Print Date: 3/10/2000

HQ ID: 0570

## Technology Needs

| <u>Related CCP Milestones</u>           | <u>Related Waste Streams</u>  | <u>Agree?</u>            | <u>Change?</u> |
|---|---|--------------------------|----------------|
|   | 02076: -  | Y                        | N              |
|   | 00791: -  | Y                        | N              |
| Site Need Code:                         | ID-3.2.32   |                          |                |
| Site Need Name:                         | Develop Thermal Treatment Unit Offgas CEM Monitors.   |                          |                |
| Focus Area Work Package ID:             | Focus Area Work Package:  |                          |                |
| Focus Area:                             | Agree with Technology Link: N   |                          |                |
| Benefits (Cost, Risk Reduction, Both):  | Risk Reduction  |                          |                |
| <u>Technologies</u>                     | <u>Cost Savings (in thousands of dollars)</u>   | <u>Range of Estimate</u> |                |
| Continuous Emissions Monitor of Dioxins | 500   | Medium                   |                |
| Site Need Code:                         | ID-3.1.45   |                          |                |
| Site Need Name:                         | Volumetric Radioassay of Lead Sheet, Plate, Shot and Irregular Shapes for 'NO DOE RAD ADDED' Determinations |                          |                |
| Focus Area Work Package ID:             | Focus Area Work Package:  |                          |                |
| Focus Area:                             | Agree with Technology Link: Y   |                          |                |
| Benefits (Cost, Risk Reduction, Both):  | Cost  |                          |                |
| <u>Technologies</u>                     | <u>Cost Savings (in thousands of dollars)</u>   | <u>Range of Estimate</u> |                |
|   |   |                          |                |
| <u>Related CCP Milestones</u>           | <u>Related Waste Streams</u>  | <u>Agree?</u>            | <u>Change?</u> |
|   | 02083: ACB - Elemental Lead   | Y                        | N              |
|   | 02047: AAR - WERF Ash to Comm. Stabilization  | Y                        | N              |
|   | 02043: AAN - Elemental Lead   | Y                        | N              |

Dataset Name: FY 1999 Planning Data

Date of Dataset: 9/20/1999

# Project Baseline Summary Report

Data Source: **EM CDB**

Operations/Field Office: **Idaho**

Site Summary Level: **Idaho National Engineering and Environmental Laboratory**

Project **ID-WM-101 / INEEL LLW/MLLW/Other Waste Program**

Report Number: **GEN-01b**

Print Date: **3/10/2000**

HQ ID: **0570**

## Technology Needs

Site Need Code: ID-S.1.02

Site Need Name: Continuous Emissions Monitors for Offgas Analysis

Focus Area Work Package ID: MW-06

Focus Area Work Package: Monitoring and Removing Hazardous and Radioactive Contaminants from Off Gas Streams

Focus Area: MWFA

Agree with Technology Link: N

Benefits (Cost, Risk Reduction, Both): Cost

### Technologies

### Cost Savings (in thousands of dollars)

### Range of Estimate

Monitoring and Removing Hazardous and Radioactive Contaminants from Offgas Streams

50,000

Unknown

### Related CCP Milestones

### Related Waste Streams

### Agree?

### Change?

02068: ABM - WERF Sized MLLW to WERF Incin

Y

N

02039: AAJ - Sludges/Liquids/Debris/Labpacks to WERF

Y

N

02056: ABA - MLLW from HLW to WERF Incin

Y

N

02038: AAI - Elemental Lead

Y

N

00791: -

Y

N

00747: A - Liquids

Y

N

00751: -

Y

N

Site Need Code: ID-S.2.02

Site Need Name: Nondestructive Assay (NDA) for Resource Conservation and Recovery Act Metal and Chlorine in Incinerator Feed

Focus Area Work Package ID:

Focus Area Work Package:

Focus Area:

Agree with Technology Link: Y

Benefits (Cost, Risk Reduction, Both): Cost

### Technologies

### Cost Savings (in thousands of dollars)

### Range of Estimate

Dataset Name: **FY 1999 Planning Data**

Date of Dataset: **9/20/1999**

# Project Baseline Summary Report

Data Source: EM CDB

Operations/Field Office: Idaho

Site Summary Level: Idaho National Engineering and Environmental Laboratory

Project ID-WM-101 / INEEL LLW/MLLW/Other Waste Program

Report Number: GEN-01b

Print Date: 3/10/2000

HQ ID: 0570

## Technology Needs

Site Need Code: ID-3.1.43

Site Need Name: Mechanical System to Transfer WERF Fly Ash from Storage Containers to a Stabilization Feed Hopper

Focus Area Work Package ID: MW-03

Focus Area Work Package: Handling Mixed Waste Contaminated Materials During Characterization, Treatment, Packaging, and Disposal

Focus Area: MWFA

Agree with Technology Link: Y

Benefits (Cost, Risk Reduction, Both): Risk Reduction

### Technologies

### Cost Savings (in thousands of dollars)

### Range of Estimate

Mechanical Systems - Evaluation of Technologies for Sorting, Size-Reduction and Handling (SSH) of Mixed Wastes

1,000

Medium

Mechanical Systems - Remote and Automation Technology Needs Investigation

1,000

Medium

### Related CCP Milestones

### Related Waste Streams

### Agree?

### Change?

02077: ABV - WERF Incin Ash to WROC Stabl

Y

N

02078: ABW - WERF Incin Ash to Hanford

Y

N

02079: ABX - WERF Incin Ash to Comm Stabl

Y

N

Site Need Code: ID-3.2.47

Site Need Name: Non Destructive Assay (NDA) of WERF Ash

Focus Area Work Package ID:

Focus Area Work Package:

Focus Area:

Agree with Technology Link: Y

Benefits (Cost, Risk Reduction, Both): Cost

### Technologies

### Cost Savings (in thousands of dollars)

### Range of Estimate

Characterization of RCRA Material Non-Destructive Assay Development

Dataset Name: FY 1999 Planning Data

Date of Dataset: 9/20/1999

Page 23 of 24

# Project Baseline Summary Report

Data Source: **EM CDB**

Operations/Field Office: **Idaho**

Site Summary Level: **Idaho National Engineering and Environmental Laboratory**

Project **ID-WM-101 / INEEL LLW/MLLW/Other Waste Program**

Report Number: **GEN-01b**

Print Date: **3/10/2000**

HQ ID: **0570**

## Technology Needs

Characterization of Contact-Handled Waste Containers for RCRA Material using Pulsed Fast Thermal Neutron Analysis

Pulsed Gamma Neutron Activation Analysis (PGNAA) System for the Assay of RCRA Metals in Mixed Waste

Solutions for TRU Waste Streams without Disposition Options

### Related CCP Milestones

### Related Waste Streams

### Agree?

### Change?

02077: ABV - WERF Incin Ash to WROC Stabl

Y

N

02078: ABW - WERF Incin Ash to Hanford

Y

N

02079: ABX - WERF Incin Ash to Comm Stabl

Y

N

Site Need Code: ID-3.1.47

Site Need Name: Pressurized Container Detection and Mitigation

Focus Area Work Package ID:

Focus Area Work Package:

Focus Area:

Agree with Technology Link: Y

Benefits (Cost, Risk Reduction, Both): Cost

### Technologies

### Cost Savings (in thousands of dollars)

### Range of Estimate

Dataset Name: **FY 1999 Planning Data**

Date of Dataset: **9/20/1999**

Page 24 of 24